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Wisconsin
Department of Commerce

Tommy G. Thompson, Governor
William J. McCoshen, Secretary

Program Letter
Bureau of Storage Tank Regulation

Fuel Storage and Dispensing at Construction Sites

The Wisconsin Administrative Code Chapter ILHR 10 - Flammable and Combustible Liquids is the code which regulates fuel storage and dispensing in Wisconsin. ILHR 10 adopts several National Fire Protection Association (NFPA) standards which apply to the regulation of fuel storage and dispensing. The code treats any portion of a property that is used to store and dispense fuels as a *service station*. ILHR 10 and NFPA 30A address the requirements for service stations. The scope of NFPA 30A applies to the fueling of vehicles licensed for use on the highway, and refers fueling of *off-the-road* earth-moving or construction vehicles to NFPA 395 - Storage of Flammable and Combustible Liquids on Farms and Isolated Construction Projects. ILHR 10 and NFPA 30 address the technical requirements for storage containers, tanks, cabinets, rooms and buildings referenced in NFPA 30A and 395. This program letter is not intended to present every detail of the storage and dispensing requirements; it is intended to summarize the predominant storage tank system characteristics acceptable by the Department for fuel dispensing at construction sites. The local fire department or the Department of Commerce may require more restrictive safeguards on a site specific application.

It must be noted that the Wisconsin Department of Transportation has the regulatory authority for transportation and consequently the technical qualification for vessels used to transport ILHR 10 regulated substances while in the transportation mode. Vessels transporting substances with the FLAMMABLE classification must meets specific DOT specifications, while vessels transporting substances with the COMBUSTIBLE classification do not have to meet specific DOT specifications. The Department of Commerce's scope of authority does not include transportation related issues or fuel dispensing activities that take place on any public right-of-way. Vehicle fuel transfer activities and the associated storage of ILHR 10 regulated substances that take place off the public right-of-way fall within the scope of ILHR 10.

The acceptable storage and dispensing system at construction sites is dependent upon the classification of the fuel, the size of the storage tank, and if the vehicles are licensed for highway use. The requirements of the code consider the characteristics of underground and aboveground tanks in relation to fire safety and exposure, potential environmental contamination from tank system leakage, and vapor emission to the atmosphere from internal and external influences.

The NFPA 395 standard has historically used the term "rural" or "isolated" in its scope, without definition, relying on the Authority Having Jurisdiction (AHJ) to clarify. NFPA 395 applies to *isolated* construction sites and the *temporary* fueling of *off-the-road* construction vehicles. The term *isolated* will have a different meaning to many people. In fire prevention terms, isolated may be a dimension of fire safety established by distance, security, or fire rating. The Department has taken a more practical approach, knowing that restricting the fueling at construction projects to non highway licensed vehicles is difficult to enforce. The Department has characterized the scope of ILHR 10 - Part 5 to be farm application and construction sites (projects) temporary in nature. Construction sites include building, road construction, forestry, and excavation projects. Quarries and asphalt or cement batch processing plants that are associated with a specific project are also treated as construction sites. A quarry or asphalt plant furnishing product to multiple projects on an ongoing basis, or a mining project, would not meet the definition of *construction project temporary in nature.* The department will allow NFPA 395 to be applied to a building construction or environmental remediation project if the project is secured from public access, the tank is not in the primary traffic pattern, and the local fire department finds it acceptable.

NFPA 395 limits the size of the aboveground storage tank (AST) to *1,100 gallons capacity* and the tank setback to no closer than 40 ft. from *any* building. NFPA 395 waives spill control, secondary containment, and overfill protection. (Refer to diagrams #1 and #2.) If the construction site is utilizing an aboveground tank larger than 1,100 gallons or places the tank within 40 ft. of any building, the vehicle fueling requirements of ILHR 10 - Part 4 and NFPA 30 apply, which includes more restrictive tank and dispensing system design safeguards than NFPA 395. (Refer to diagram #3.)

Aboveground tanks 1,100 gallon and less capacity located at temporary construction sites are not required to have pre-installation plan review or be registered. However, they are required to be code complying and notification is required to be provided to the local fire department and Department of Commerce Local Program Operator (LPO). Any AST at a construction site not classified as temporary in nature, and ASTs larger than 1,100 gallon capacity at temporary construction sites must have pre-installation plan review and be registered with the Department. UST/AST Inspectors have the authority to "Red-tag" non complying tanks, which will place the tank out of service until correction is made.

All Underground storage tanks (USTs) must have pre-installation plan review and be registered with the Department.

The fueling of vehicles directly from a tank vehicle (tank wagon, bulk transport trailer, bulk truck, etc.) continues to be misunderstood and fueling practices from delivery vehicles are frequently non compliant with the code. NFPA 30A-8-3.3 (1987 Edition) and NFPA 30A-9-3.3 (1996 Edition) do not restrict the fueling of vehicles from mobile tanks provided the conditions of 8-3.4 and 9-3.4, respectively, are complied with. The language is intended to restrict direct vehicle fueling to bulk delivery trucks that are driven on to the property, transfer fuel to the vehicle(s), and driven off site at the conclusion of the fuel transfer.

The Department has responded to several inquiries and situations involving bulk delivery vehicles parked at a construction site for a period of time and used as stationary fueling. NFPA has rendered a formal interpretation that mobile tanks parked for days, weeks, or months before being shipped or moved must be provided with the drainage, impounding and separation distances of NFPA 30. *This interpretation however, does not allow vehicles, highway licensed or off-road non licensed vehicles, to be fueled from a bulk mobile tank detached from its power unit*. A fuel vendor or contractor can not use a bulk delivery truck or trailer as a stationary storage tank by parking the vehicle and making bulk fuel deliveries to the parked vehicle for dispensing into drive-up vehicles. A fuel vendor or contractor can not utilize a bulk transport by dropping the trailer with fuel at a site, allowing drive-up fuel dispensing, picking the trailer up when empty, transporting trailer to refill, and dropping the trailer back at the site to continue the cycle.

Dispensing of Class I or Class II liquids from a tank vehicle to a motor vehicle located at construction, commercial, industrial, governmental, or manufacturing establishments and intended for fueling vehicles used in connection with their business shall be permitted provided:

a) An inspection of the premises and operations has been made and approval granted (in writing) by the local fire department (AHJ).
b) The tank vehicle complies with the requirements covered in NFPA 385, Standard for Tank Vehicles for Flammable and Combustible Liquids.
c) The dispensing hose does not exceed 50 ft. in length.
d) The dispensing nozzle is a listed automatic-closing type without a latch-open device.
e) Nighttime deliveries shall be only made in adequately lighted areas.
f) The tank vehicle flasher light shall be in operation while dispensing.
g) Fuel expansion space shall be left in each fuel tank to prevent overflow in the event of temperature increase.

The Department has responded to building contractor concerns regarding sites which experience changing construction logistics. Construction may progress from one area on the site to another, resulting in various staging areas having to be periodically relocated. Another practice involves equipment with limited mobility located in areas where it is more practical to take the fuel to the equipment, rather than move the equipment to a fixed storage tank. An example is drilling, mixing, and support equipment located in below grade excavations. The Department will allow mobile fuel storage tanks at construction sites if the mobile tank is designed to comply with NFPA 385 requirements and is no larger than 1,100 gallon capacity.

May 21, 97

Bureau of Storage Tank Regulation
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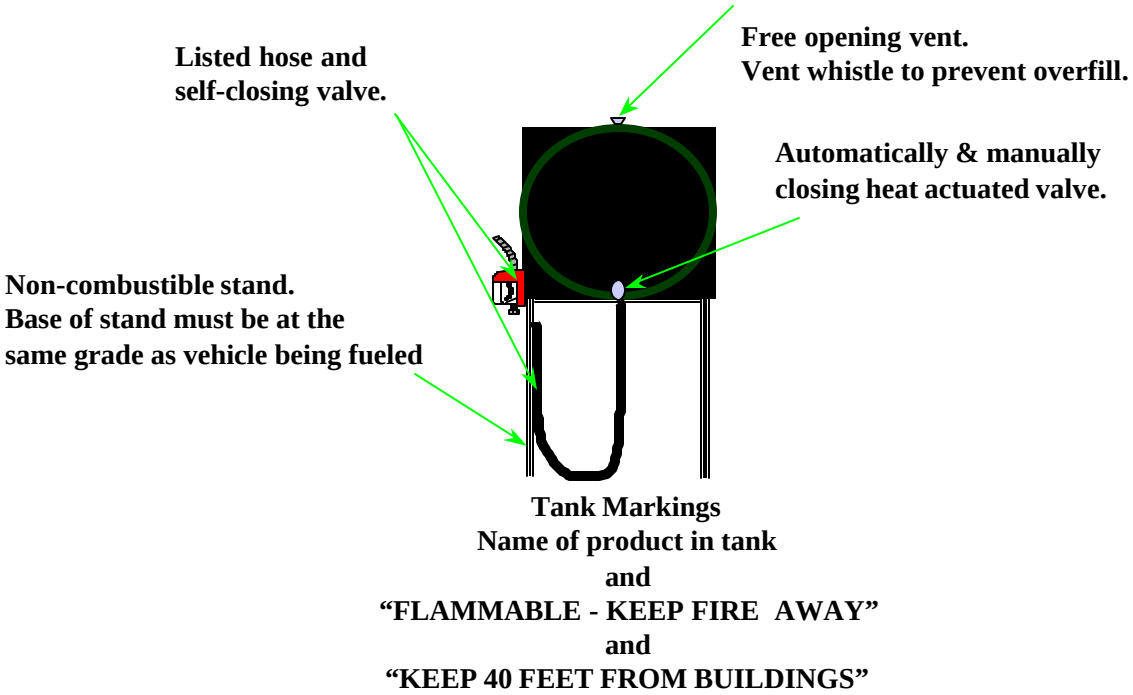
Madison, WI 53707

Tanks Elevated For Gravity Discharge

(Farm & Construction Sites Only!)

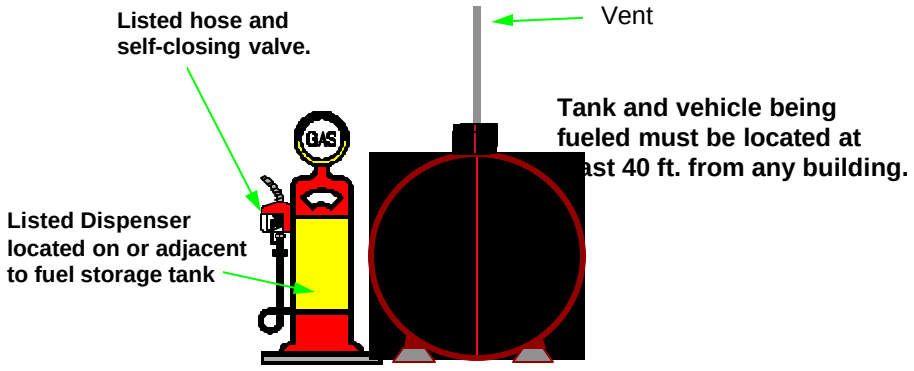
Maximum size - 1100 gallons capacity



Tank Markings
Name of product in tank
and
"FLAMMABLE - KEEP FIRE AWAY"
and
"KEEP 40 FEET FROM BUILDINGS"

Diagram #1 - Gravity Discharge

Skid Mounted Tank
(Farm & Construction Sites Only!)
Maximum size - 1,100 gallons capacity



Tank Markings
Name of product in tank
and
"FLAMMABLE - KEEP FIRE AWAY"
and
"KEEP 40 FEET FROM BUILDINGS"

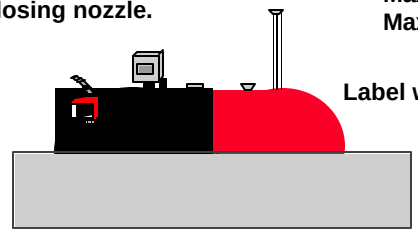
Diagram #2 - Skid Mount Placement at Grade

Farm or Construction Site Tanks with Less than 40 ft. Setback or Greater than 1,100 Gallon Capacity

Separate vent and fill opening.
Operating emergency relief vent.

Listed electrically powered dispenser.
Electric solenoid valve or vacuum breaker if tank mounted dispenser.
Listed hose and self-closing nozzle.

Listed tank.
Max. 10,000 gal. per tank.
Max. 30,000 gal. per site.



Label with name of product in tank.

Secondary containment 125% of tank capacity.
Tank elevated 1 ft. above floor of containment.
Tank set back 1 ft. from dike wall.
Rainwater removal by self-closing valve if through wall, or by gravity-siphon pump if over the wall.
Sump pumps prohibited.

Diagram #3 - Secondary Containment